

REMARKS

Applicants appreciate the thorough and detailed examination of the present application as evidenced by the Office Action dated September 11, 2007 (hereinafter, the "Office Action"). Claims 1-69 are pending in the present application, Claims 7-10 and 16-69 have been withdrawn from consideration and Claims 1-6 and 11-15 stand rejected. Applicants respectfully submit that the pending claims are patentable for at least the reasons presented herein.

Claim Rejections Under 35 U.S.C. §112 (Indefiniteness)

Claims 1-6 and 11-15 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. *See* Office Action, page 2. More specifically, the Office Action asserts that a particular recitation in Claim 1 is unclear as to what amount constitutes the oxygen content of the metal oxide. *See* Office Action, page 2. In order to advance prosecution of the present application, Applicants have amended Claim 1 to delete the recitation referenced by the Office Action and to add the recitation "comprising La_2O_x wherein $0 < x < 3$ " to clarify the invention recited in the claims. Accordingly, Applicants respectfully submit that Claims 1-6 and 11-15 particularly point out and distinctly claim the subject matter which Applicants regard as the invention, and Applicants respectfully request that this rejection be withdrawn.

Claim Rejections Under 35 U.S.C. §103

Claims 1-6 and 11-15 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Publication No. 2003/0040196 to Lim et al. (hereinafter, "Lim") in view of U.S. Patent No. 5,506,037 to Termath (hereinafter, "Termath") and U.S. Publication No. 2004/0065877 to Hayashi et al. (hereinafter, "Hayashi"). *See* Office Action, page 5.

Claim 1 has been amended to recite as follows:

A method of forming a metal thin dielectric film, comprising:
forming an *oxygen-deficient metal oxide dielectric film* comprising *La_2O_x , wherein $0 < x < 3$, on a semiconductor substrate by atomic layer deposition (ALD) using a lanthanum-containing compound*; and
forming a metal oxide dielectric film on the oxygen-deficient metal oxide dielectric film by *ALD using a lanthanum-containing compound and an oxidizing agent*.

Applicants respectfully submit that the cited references fail to teach or suggest a method of forming a metal thin dielectric film as recited in amended Claim 1 reproduced above with portions highlighted to illustrate at least some of the distinctions between the cited

references and the present invention. Moreover, in view of the amended recitations, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to combine the cited references. The Examiner is correct in noting that an artisan would be aware of Termath or any other reference that the Examiner has located. Applicants clarifying response is that the artisan would not be motivated to combine or rely upon references related to glass panes for automobile windows or windshields in view of goals to achieve methods of semiconductor fabrication in view of the distinct concerns related thereto. However, and more importantly, the combination of Lim with Termath and/or Hayashi fails to teach or suggest the present invention as recited in the amended claims.

Accordingly, Applicants respectfully submit that Claims 1-6 and 11-15 are not obvious in view of the cited references, and Applicants respectfully request that this rejection be withdrawn.

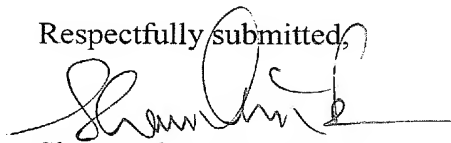
In summary, Applicants respectfully submit that all the pending claims are patentable, and Applicants further request reconsideration of the withdrawn claims in view of the amendments and remarks presented herein.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request that all outstanding rejections to the claims be withdrawn.

The Examiner is invited and encouraged to contact the undersigned directly if such contact will expedite the prosecution of the pending claims to issue. In any event, any questions that the Examiner may have should be directed to the undersigned, who may be reached at (919) 854-1400.

Respectfully submitted,



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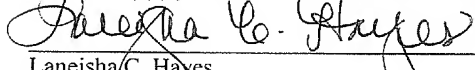
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CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on November 13, 2007.



Laneisha C. Hayes
Date of Signature: November 13, 2007